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ABSTRACT

Drawn from an annual symposium held at the University of Guam to recognize and encourage scholarly activities of graduate students in the reading education department and to promote continued interdepartmental dialogue on the teaching of reading, the papers in this compilation deal with the prerequisites for effective reading instruction. Topics discussed in the papers are (1) the effects of bibliotherapy on student attitudes and self-concepts, (2) the reading interests of middle school students, (3) study skills instruction, (4) the importance of interest as a motivating factor in reading instruction, (5) the motivational effects of material rewards or reinforcement toward reading, and (6) brain functioning in the process of reading. (FL)

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PROCEEDINGS OF THE THIRD ANNUAL SYMPOSIUM ON READING EDUCATION

Edited by

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and Lorraine Yamashita

University of Guam
UOG Station
Mangilao, Guam, USA 96913

CS 007268

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ACKNOWLEDGEMENTS

We acknowledge the efforts of our graduate students and College of Education professors who presented papers for this Symposium.

Acknowledgement with gratitude is also extended to the contributions made by the Responders, whose extensive work in the field of reading, language and research have added the necessary "real world" dimension to the discussions following each set of papers.

Special acknowledgement is extended to President Rosa Carter, Academic Vice President Joleen Bock, Joseph Kivlin, Dean of Arts and Sciences, Michael Caldwell, Dean of Education, without whose support and encouragement this endeavor would not have been possible.

Acknowledgement is also extended to the Audio-Visual Department of the R.F.K. Library under Dean Kenneth Bickford for assistance and technical support.

Special acknowledgement is extended to Ms. Antonia Paulino and her staff for the typing, announcements, program preparation, duplication and compilation of this manuscript and correspondence.

CHARLEEN D. PERYON
December 1, 1982

DESCRIPTION

The Reading Education Department of the University of Guam, under the direction of Dr. Charleen Peryon held its Third Annual Symposium on reading education on November 17, 1982, at the Robert F. Kennedy Library. The purpose of the annual symposium is to recognize and encourage scholarly activities of graduate students in the department and to promote continued interdepartmental dialogue among the disciplines that interface with the teaching of reading.

The event opened with brief remarks by Dr. Joleen Bock. She commended the audience for their concern for improving the teaching of reading as evidenced by their attendance.

Dr. Michael Caldwell, Dean of the College of Education discussed the challenge of educating great numbers of students in English, not only on Guam, but throughout Micronesia and the Pacific Basin. In order for these students to compete in business, the professions and trades, they need to be trained in the common language of English. As the only United States institution of higher education here, we all share in this great responsibility.

The major focus of this year's Symposium dealt with the Prerequisites to Effective Instruction in reading, particularly motivation, interest, the use of bibliotherapy and study skills. One paper dealt with the brain functioning in the reading process.

After each group of papers was presented, a panel of responders reacted by asking questions, presenting different views or aspects of the problems on the information presented, and by adding information from their experiences as practitioners in their respective fields of expertise. The purpose of discussions involving responders was to augment ideas and reports culled from literature by the presenters. No debates were intended.

Attendance at the Symposium was by invitation. Reading and language specialists from the university and public and private educational agencies on the island were invited. Sixty-two persons attended.

THIRD ANNUAL SYMPOSIUM
ON READING EDUCATION

Convened by

Charleen D. Peryon, Ph.D.
Chairperson, Reading
Education Department

November 17, 1982
A-V Room Number One
Robert F. Kennedy Library
Mangilao, Guam
Marianas Islands, USA 96913

PROGRAM

3:30 p.m. Welcome and Introduction
Charleen Peryon, Ph.D., Chairperson

3:35 p.m. Special Greetings
Michael Caldwell, Ph.D., Dean, College of Education

3:40 p.m. Opening Remarks
Dr. Joleen Bock, Academic Vice President

3:45 p.m. Presenters

Josephine Duenas, Classroom Teacher
"Bibliotherapy: Effects on Attitudes and Self-Concept."

Sister Theresa Quichocho SFCC, Classroom Teacher
"Reading Interests of Students In Middle School."

Joan Hornbuckle, LAMP Teacher
"Study Skills Instruction."

4:20 p.m. Comments from Responders followed by those from the audience

4:35 p.m. Presenters

Carina Castro, Special Education Teacher
"Effects of Bibliotherapy on Self-Concept, and Problems."

Chie Paik, Teacher of Japanese Language
"How to Make a Horse Drink."

Theresa Tornito, Special Education Teacher
"The Motivational Effects of Material Reward or Reinforcement Toward Reading."

Anthony Kallingal, Ph.D. Professor of Education
"Principles of Brain Functioning In the Process of Reading."

5:15 p.m. Comments from Responders followed by those from the audience.

5:30 p.m. Closing Remarks - Charleen D. Peryon

RESPONDERS

Dr. Dirk Ballendorf, Director,
Micronesian Area Research Center

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Dr. Lourdes Klitzkie, Assistant Professor of
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Sandra Liberty, Coordinator Reading Program,
Guam Community College

Susan Tenorio, Assistant Professor of English,
Guam Community College

BIBLIOTHERAPY:

Effects on Attitudes and Self-Concept Of Students in a School Setting

by

Josephine C. Duenas

Seventh Grade Teacher

A paper presented at the

Third Symposium on Reading

Sponsored by

Reading Education Department
University of Guam
Mangilao, Guam 96913

BIBLIOTHERAPY:
EFFECTS ON ATTITUDES AND VALUES
OF STUDENTS IN A SCHOOL SETTING

ABSTRACT

Books have long been recognized as valuable and effective tools in helping children solve their personal and educational problems, and in developing the skills necessary for successful learning. They have also been useful in helping children develop a more positive self-concept. Using books in this way is known as Bibliotherapy.

This paper presents a review of literature on the procedure called Bibliotherapy; it's definition, techniques and goals; and studies researching it in a school setting.

BIBLIOTHERAPY DEFINED

Bibliotherapy has been defined by Zaccaria and Moses (Nemanich, 1974), as The process of using various kinds of reading materials in teaching and/or counseling for the realization of psychological and mental health objectives."

Rubin (1979) prefers to define bibliotherapy as "A program of activity based on the interactive process of media and the people who experience it. Print or non-print materials either imaginative or informational are experienced and discussed with the aid of a facilitator."

Russell and Shrodes (Narang, 1975) explains that bibliotherapy is "A process of identifying with another character or group so that feelings are released and the individual develops a greater awareness of his own motivations and retionalizations of behavior...this is a process of dynamic interaction between the personality of the reader and literature." Since the definition and the field of bibliotherapy through classifications according to participants, goals, settings, and leaders has been adopted.

TYPES OF BIBLIOTHERAPY:

Rubin (1978) states that the three types of bibliotherapy are institutional, clinical and development.

Institutional bibliotherapy is the direct descendent of bibliotherapy as practiced in the 1930s by psychiatrists,

notably William Menninger. It refers to the reading of literature (usually didactic), by individual, institutionalized patients who then discuss it with the doctor. The phrase "prescription of books for specific ills" applies to this approach. The goal is primarily informational, although some insight materials may be offered; the setting is an institution; and the facilitator is a physician or a medical team which may include a librarian. Rubin states that these types of bibliotherapy are not popular today although some doctors still use media with private patients in their homes.

Clinical bibliotherapy refers to the use of imaginative literature with groups of clients with emotional or behavioral problems. The goals range from insight to change in behavior; the setting is either an institution or the community; and the facilitator is either a librarian or a doctor, usually in consultation with the other.

Developmental bibliotherapy refers to the use of both imaginative and didactic materials with groups of "normal" individuals. The goal is to promote normal development and self-actualization or to maintain mental health in stressful situtations. This type of bibliotherapy is often provided in schools, libraries, and other community settings. The program discussion is designed and led by a librarian, teacher or other member of the "helping professions" such as a social worker or psychologist. Developmental bibliotherapy is often used by public librarians. It can be utilized as part of consciousness-rasing or sensitivity-training programs for professions, or

offered as a public program to satisfy the demand for self-actualization activities.

GOALS

The goals of bibliotherapy as stated by Rongione (1972) are

(a) to teach a person to think constructively and positively;

(b) to encourage people to talk freely about their problems;

(c) to help people analyze their attitudes and mode of behavior;

(d) to point out that there is more than one solution to a problem;

(e) to stimulate an eagerness to find an adjustment to problems, an adjustment that lessen conflict with society; and

(f) to assist people in comparing their problems with those of others.

BIBLIOTHERAPY IN SCHOOLS

Educational settings for bibliotherapy have been popular since the 1940s, with bibliotherapy groups led most frequently by the classroom teacher.

Schools have been obvious sites for bibliotherapy because

it is compatible with the goals of contemporary education, which include fostering development of a whole, adjusted personality able to deal with today's world. (Rubin, 1979)

Gray (Schultheis, 1969) recommends the use of bibliotherapy in the classroom whereby the child may discover how others face and solve existing problems.

Schultheis (1970) states that bibliotherapy lies within reach of every teacher - who need not be a skilled therapist, nor does the child need to be seriously handicapped or a mal-adjusted individual needing clinical treatment.

TECHNIQUE:

How does one begin this technique?

Schultheis (1970) states that to begin this technique, it is necessary for the teacher to become well-acquainted with children's books so that she/he may be able to give capsule summaries of appropriate stores when the right time comes. The teacher might also categorize books for easy access according to children's problems and needs. Such categories might include problems of (1) appearance (2) physical handicaps (3) siblings, place in family, new baby; (4) acceptance by peer group or by oneself; (5) a typical unhappy home situation; (6) economic insecurity and unsettled living; (7) foreign or different backgrounds; and (8) need for diversion. Schultheis goes on to explain that group guidance sessions are among the best ways to infroduce bibliotherapy.

Frasier and McCannon (1981) discuss the use of bibliotherapy with gifted children. They give the following procedure before beginning the problem. The first step in implementing a bibliotherapy program is to determine the specific problems faced by gifted students. This may be done by observations, interviews, analysis of responses to open ended sentences, group discussions, analysis of responses to self-concept measures and the like.

Next, the gifted teacher should consult with the school librarian or the children's librarian at the local public library to obtain assistance in choosing appropriate books to help students solve these problems.

After appropriate books are located, arrangement should be made to have as many of these books as possible available in the classroom.

Bibliotherapy is also one way of helping children who are victims of abuse. Watson (1980) explains that the classroom teacher is seldom prepared to deal with severe cases of child abuse. A counselor may effectively involve the child with an emotional and psychological attachment to a literary character. The child can then participate vicariously - in incidents that are developed in a well-written story. The child may gain insights into personal problems and may even find a solution.

Recent investigation have focused on the effect of bibliotherapy on the change in the reader's attitude and self-concept. Only studies with a school setting will be reviewed.

Appleberry (1968) studied the effect of bibliotherapeutic

reading on third graders in normal classroom situations. Twelve classes of heterogeneously grouped third grade children in three elementary schools of different socioeconomic levels in a Gulf Coast industrial city were selected at random for the study. There were 270 pupils who participated in the program, either as experimental or control subjects.

The entire third grade children in the three schools were pre-tested with the California Test of Personality, Form AA, and post-tested at the end of the nine weeks experimental period with the California Test of Personality, Form BB.

The seven experimental classes did all their library reading from a large group of books selected because of the value for bibliotherapy and listened to their teachers read many of the selected stories aloud. The five control groups did their library reading as usual from any book except those that were selected for bibliotherapy.

Each child kept a list of books to read, rating them "good", "fair", or "poor". Nearly every book was rated good. At the end of nine weeks each child titled his book list with "B" (best book he had read), and "H" (book that had helped him solve a problem), and an "F" (one he would recommend to a friend who has a problem).

There was a significant difference in the scores of the experimental and control groups. In nine of the twelve subtests analyzed, the experimental group scores were significantly higher than those of the control group.

Schultheis (1969) studies the effect of bibliotherapy upon

academic performance in reading and social adjustment of children in grades five and six. A six month experiment was conducted in three similar schools in Anderson, Indiana.

Instruments used in this study included: California Short-Form Test for Mental Maturity, Gates Reading Survey, Amatora's Personality Rating Scale, and two devices constructed for this study, namely, "myself and my classmates and classroom seating plan."

Approximately 500 books were compiled for use in storybook guidance (bibliotherapy; filmstrips, transparencies and tapes were utilized in guidance sessions).

Bi-weekly meetings were held in the experimental schools from October through March. Ten sessions were held in which pupils of School A received double treatment (bibliotherapy with group guidance discussions) and pupils of School B received a single treatment (group guidance discussion only) School C, the comparison group, received neither treatment. A total population of 340 pupils completed the experiment, 120 in School A, 120 in School B, and 100 in School C.

Results from the Gates Reading Survey reveals that pupils in School A obtained overall highest mean score, School B showed the highest mean gain. School C scored fairly high in the pre-test but had slight gains.

It was concluded that bibliotherapy and guidance treatment can yield positive results in both reading achievement and social adjustment.

Narang (1974) wrote a brief review of bibliotherapy done

in a school-setting. He states that three of the studies dealt with the attitudinal change towards Indians, Eskimos, and Negroes. Narang reports a study done by Fisher in 1965 to examine the change of fifth grade children toward Indians. He found that reading followed by discussion produced more significant attitude changes than reading without discussion. Tauran in 1967 studied the effects of reading on the attitudes of third graders towards Eskimos. His study indicated that attitudes of children were influenced either positively or negatively depending upon the type of material read. Zucaro's study in 1968 concluded that bibliotherapy was effective in changing the attitudes of suburban school children toward American Negroes in a favorable direction.

To further support the thesis that bibliotherapy has an effect on attitudes, Narang reported a study done by Shirley in 1969 to examine the influence of reading concepts on attitudes and behavior of 420 adolescents. There was a 40% change in attitudes and a 15% change in behavioral response.

Stephens (1974) investigated the effects of prescribed literature on the reader's self-reliance. The subjects used in the investigation were 36 sixth grade school students from the ages of 11 to 13. Pre-and post-test measures of self-reliance were made using the California Test of Personality and The Teacher Rating Scale. The design consisted of an experimental Group I - Bibliotherapy; and experimental Group II - Recreational Reading; and Group III - A Control Group.

Experimental Group I was presented prescribed literature

intended to promote greater self-reliance. Experimental Group II had released time for recreational reading without prescribed literature. Group III was the control Group without prescribed literature or released time for recreational reading.

The results showed that the bibliotherapy group has higher mean adjusted post-test scores than the other two groups, but the differences were not statistically significant.

Kanaan (1975) explored the use of bibliotherapy as a means of resolving peer acceptance problems in a group of fifth grade students who appeared to have weak peer relationships and a poor self-concept. This group was exposed to reading materials that dealt with these social problems. The children were involved in an informal, open-ended interaction for a six week period. Pre-and post-testing employed a sociometric device and the Piers-Harries Self Concept Scale. A comparison of the data suggested that bibliotherapeutic treatment had an effect upon the instructional group.

SUMMARY

The literature given suggestes that there are many results that may be obtained by the skillful use of bibliotherapy. The following list has been compiled from Shrodes, Russell, Zaccaria and Moses. (Nemanich, 1974).

Bibliotherapy may:

1. Help the student understand her/his own behavior and that of others.
2. Contribute to competence in activities with the accompanying positive effects of suc achievement.
3. Give a feeling of belonging to and understanding one's own country.
4. Provide fun and escape.
5. Contribute to ethical values.
6. Provide better understanding of the motives of human conduct in general and one's own in particular.
7. Raise awareness of the many-sided influences which play constantly upon students as they adjust to the world they live in.
8. Contribute to a wider and deeper understanding of the problems of life.
9. Provide a substitute for direct experience, permitting the reader to stand off to one side and observe life.
10. Help reinforce acceptable social and cultural

behavior.

11. Offer opportunities for identification.

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"THE EXPRESSED READING INTERESTS OF STUDENTS IN THE MIDDLE SCHOOL"

by

Sister Theresa S. Quichocho (SFCC)

Sixth Grade Teacher

A paper presented at the

Third Symposium on Reading

Sponsored by

Reading Education Department
University of Guam
Mangilao, Guam 96913

THE EXPRESSED READING INTERSTS OF STUDENTS IN THE MIDDLE SCHOOL

ABSTRACT

Two major objectives of any total reading program should be to build a lasting interest in reading and to improve reading tastes. This paper reports surveys taken on the reading interests of sixth, seventh, and eighth grade students in the Middle School from the years 1969 to the present time. Also included is a brief report of the factors that influence the reading interests of middle school students. These factors are divided into two categories which are (1) personal determinants and (2) institutional determinants.

The reading interests of students have always been a particular concern to librarians and teachers. This review of literature focuses on the reading interests of school students, specifically the students of the Middle School.

"Middle School" is the administrative unit between elementary grades and high school grades. The term is used in this paper to refer to students in the sixth, seventh, and eighth grade.

"Interests" are personal tastes; they cannot be forced on one for one to enjoy. They can be suggested, introduced, and made available though.

This review of literature concerning the reading interests of students covers the period from 1968 to the present. McKay's (1971) survey of reading interests included students in the sixth grade from selected schools in urban and suburban Pittsburg settings.

Prominent amount McKay's findings were:

1. An extremely highly selection rate of biography, humor, and mystery by the brighter students as compared to the slower students.
2. The lack of interest in reading anything, evidenced by the responses of those students who scored low on test of reading achievement.

Goetze (1972) studied the reading interests of sixth, seventh, and eighth grade students in a city school in the metropolitan Atlanta area.

The students were grouped in this manner: A-B students referred to students with a scholastic average between 85-100; C-D students between 60-85; and E students below 60%.

The target population for this study were 1,300 students at the Marietta Junior High School with approximately the following percentages: 50% boys, 50% girls; 70% white, 30% black; 40-60% A-B students, 30-50% C-D students, and 10-15% E students.

The conclusion were:

1. Sixth, seventh, and eighth graders selected sexy stories, drug addiction, sports, and crime among the first five. The first choices varied for each of the grades, but the difference between the first and second choices was generally small.
2. A large variation existed in the preferences of boys and girls. Boys displayed more interest in sports than girls, who rated sports stories quite low. Boys rated drugs and drug addiction as their first choice of story topics.
3. The difference in first choice of white and black students was expected, with white students showing little interest in stories about Negroes, while black students rated stories about blacks first. However, both white and black students generally agree on their interests in sexy stories, drug adiction, crime, and sports stories.

4. Above average and average students both selected mystery-detective stories as their first choice; below average students listed mystery-detective stories a close second behind sports stories.

Penny (1973) designed a study to investigate the reading interests of seventh grade students of Shawnee, Oklahoma. Students were asked to complete a Reading Interest Questionnaire, which consisted of a list of subjects from which there were asked to check their interests. The questionnaires had been classified into six categories: (1) Adventure, Romance Mystery; (2) Religion; (3) Arts and Music; (4) Amusement, Sports, Games; (5) Humor or Fanciful; and (6) Informative.

The analysis of data concluded that socio-economic status level (SES) and reading interests in the categories of Adventure, Romance, and Mystery and of Religion were not significantly related, but SES was significantly related to the categories of Art and Music; Amusement, Sports, and Games; Humor or Fanciful; and Informative.

Norvell (1973) reported that in grade six, the gifted children perferred humor. Humor was their top selection of 31 types of reading materials.

Peterson's (1976) survey of reading interests included students in the seventh grade. The survey consisted of 90 boys and 90 girls from 10 different schools in the Perth Area in Australia. A questionnaire was devised and administered by a group of third year students in the Churchlands Teacher

Education Program. The examiners would read the question aloud to the group, and the students would record their answers on individual questionnaires.

In regards to reading interests, the children were asked what book they would choose to read (or have read to them), if they could choose any book they wanted.

Results showed that mystery stories were the most popular kind of reading material, especially among girls (40% of choices). Next popular were adventure stories, then fantasy which at this level included science fiction, horror stories, ghost stories, and still a moderate interest in fairy tales and legends.

Next in popularity were factual books, which for boys consisted primarily of an interest in space travel and for girls in what they called "true stories". Next came animal stories, mostly choosen by boys, and books about sports.

There was almost no choice of books of boigraphy, poetry, humor, history, romance, relogion, and plays among seventh grade children.

Stanchfield and Fraim (1979) reported a study done by Culliton on the reading interests of upper grade boys. He lists the categories of adventure, mystery, animal stories, humor, and career interests as recurring consistently in the various interests survey.

Barnes' (1980) survey of reading preferences included students in the sixth, seventh, and eighth grade. The 1980

survey showed that Mystery was the top choice for each grade. Adventure enjoyed second place in each grade. Romance and Westerns were equally in the cellar for all the grades. An exception was in grade eight were romance captured the fourth spot. Ghost stories were still popular with the students. Sports was always in the middle interest range. However, many girls in the sixth grade placed this in their top four choices.

Geostree's (1981) study investigated the reading interests of gifted children, which included students in the sixth grade. Based on the findings of this study, the most preferred topic of reading materials by the gifted children were comedy.

Factors Influencing Reading Interests

A number of factors seem to influence reading interests. None of these factors appear to operate in isolation, but their interrelationships have not been clearly established. (Harris and Sipay, 1975)

Purves and Beach (Harris and Sipay, 1975) categorized the factors influencing reading interests under two main headings - personal and institutional determinants.

Personal determinants are personal factors that may influence reading interests. They are age, sex, intelligence, reading ability, attitudes, and physiological needs.

Institutional determinants - these factors refer to the availability of books, (socio-economic status and ethnic background; peer, parents) and teacher influences; and T.V. and movies.

In relation to personal determinants, Mott (1970) concluded in his study that sex and age were found to be dominant factors influencing interests.

Martin (1972) on the other hand found that the expressed reading interests of sixth graders were greatly affected by sex and race, less so by I.Q., reading achievement, and socio-economic status, and not at all by chronological age.

Goetze (1972) stated in his study that the primary factor influencing sixth, seventh, and eighth grade students to read were magazines and television movies and programs.

Hamilton (1973) reported that T.V. -tie ins were effective in promoting an interest in reading among pupils in a low socio-economic group and with a low I.Q. He also concluded that the reading habits of boys were more influenced by television than were the reading habits of girls.

Helterbridle's (1975) study ranked variables according to the degree of relationship to preferred reading interests in this order: (1) sex; (2) age (3) intelligence; (4) reading attitude; (5) reading achievement.

Harris and Sipay (1975) state that interest in reading is highest where there are both classroom and school libraries. They also indicate that there are other factors influencing

reading preferences. They include illustrations, the reading of comics, and the difficulty of the material itself.

SUMMARY

In this review of literature of reading interests, I have attempted to provide a descriptive account of the reading interests of middle school children. The usefulness of a knowledge of reading interests will help librarians and teachers in supplying reading materials of interest and values to the students they serve and in guiding and directing the reading of these students. These studies have shown that the interests of middle school students vary. Therefore, the results of these survey should not be generalized to individual students.

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Study Skills Instruction

by

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A paper presented at the

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ABSTRACT

This paper deals with the general area of study skills. It seeks to examine how study skills fit into the total reading picture. It also looks at the research into specific study skills and how they have aided reading comprehension and understanding. And finally this paper takes a look at some practical suggestions for implementing study skills instruction in the classroom.

A framework for this study will be provided by looking at the reading process and how study skills fit into a total reading picture. Second, we will look at the research which has taken place in the area of study skills which seem to divide themselves into three areas: (1) research into one specific study skill conducted with a very limited sample, (2) research into several or more study skills conducted with a very large sample, and (3) discussions of specific skills with no research involved. And last, suggestions for implementing study skills instruction in the classroom will be discussed.

Any discussion of study skills must begin with a definition of the reading process and what it involves. Jerry Johns (1976) in Make Reading Sensible suggests that a reader can not just say words. A reader must be an active participant in the reading process. David Shepherd, (1979) in Improving Content Area Performance Through Improving Student Study Skills elaborates further. He suggests that study skills become the "key" in the communication process between author and reader. The efficient reader can make study skills work for his or her good. Study skills are used as a tool to glean the information that the author wishes to impart. When the skills have been mastered through experience, they become "second nature" and allow the receiving of information without a hindrance.

What elements are involved in study skills that make them so important? There are many common elements, but different authors include and exclude certain skills and arrange their ideas in unlike manners.

This can be seen in the following two examples. David Shepherd, in the work previously mentioned, includes the following areas in his organization of study skills:

1. Techniques for attacking the assignment-this includes memory retention procedures such as SQ3R or PQRST
2. Seeing the organization of materials-such as the interrelationships between units and chapters and the division of chapters into sections, topical headings, paragraphs, etc.
3. Locating and synthesizing information- this includes delineating the problem, noting entry words, library skills, reading to get information, writing a report, and giving a report
4. Using graphic aids- knowing what to look for in maps, charts and graphs.
5. Following directions- this includes careful reading to get a general idea of what is desired, getting any needed materials and finally, following deirections step by step

Sharon Copobianco et al (1977) in Study Skills: The Key To Reading In The Content Area lists the following study skills:

1. Location of information- this includes alphabetizing, library skills, how to use parts of a book
2. Selection of information- this includes main ideas, details, inferences, etc.
3. Organization of information- this includes recognizing how the author organized the materials, outlining, notetaking, etc.

4. Graphic aids
5. Following directions
6. Devoloping flexibility in reading rate-this includes an understanding that the purpose for reading determines reading rate.

Several problems seem to exist with the teaching of study skills. Black and Harding (1981) in Developing Reading in the High School Physics Class suggest that many teachers feel that all reading instruction stops with the elementary grades or that only those having difficulty need instruction in specific skills. Study skill development at the secondary level, at best, is often left to the Language Arts teacher. The authors of this article state this should not be so. They aptly point out, "As the subject matter 'content' becomes more abstract, reading skills become diversified and more refined. The subject area teacher is in the best position for teaching these specific skills while using the content for which they were intended" (Black and Harding, 1981, pp. 106-112). David Shepherd similarly agrees that the content area teachers have a responsibility to teach study skills. He writes, " What the content teachers are doing, then, is teaching the student the process of how to get information by using the course content they wish the student to acquire. It is a change of focus from just mere coverage of the content to how to acquire the the content with the content being acquired as the student learns the technique" (Shepherd, 1979).

Research of literature in the area of study skills seems to fall into several general areas or catagories: (1) researchinto one specific

study skill conducted with a very limited sample, (2) research into several or more study skills conducted with a very large sample, and (3) discussions of specific skills with no research involved. Discussion and examples of each follow.

The first type of research can be seen in the following examples. Judith Slaughter (1979) did research in teaching graph reading to second and third graders. Some 222 children were involved from four schools in Montreal, Canada. An experimental group of 111 pupils received instruction on how to read graphs. The control group of 111 received no instruction. Both groups were given a pretest and posttest of the Gates-MacGinitie and in graph reading. Statistical analysis showed: (1) that though both groups made gains, those made by the experimental group were substantially greater, (2) neither sex or grade level made any difference in score results, (3) posttest scores and reading percentiles were positively correlated, (4) correlations between percentiles and pretest and posttest were not significant.

Sybil Hoffman (1978) conducted a study on The Effects of a Listening Skills Program on the Reading Comprehension of Fourth Grade Students. Both experimental and control groups consisted of 12 boys and girls. The Reading Comprehension subtest of the California Achievement Test was used as a pretest and posttest for both groups. The experimental group was taught using Listening Comprehension Skills, Level B, published by the Alameda County Schools, California. The control group continued in normal language arts activities. The study results showed that those

participating in the Listening Comprehension Skills program made a significant improvement.

Research on The Effectiveness of Study Skill Instruction for Seventh Graders was compiled by Jill Slansky (1979). Her study group was 148 seventh graders at N.J. Platt Junior High School in Boulder, Colorado. Seventy students in various geography sections received study skills instruction, and seventy-eight received none. Students were tested on study skill information and were also given a study habits questionnaire. Results in academic achievement were determined by grade point average and geography grades. Students in the experimental group showed an increased knowledge of study skills. However, there was no marked increase in the other areas of study habits, grade point average or geography grades.

Seventh graders were also the objectof a study by Mary Lu Wiley (1979). She studied the effects of teaching studens how to take notes from written materials. Both note taking ability and its influence on later testing were studied. Six classes totaling 84 students were used. Both control and experimental groups had high, medium, and low classes. The experimental group was given extra instruction. Later, all groups took notes from passages like all groups had read for the pretest. Four days later all students were permitted to look over their notes before taking a multiple choice test. It was discovered that those receiving instruction performed better on a test on how to take notes. However, the experimental group high class showed more improvement thatn the experimental low class.

There was a significant correlation between ideas found in notes and the results of the multiple choice test.

One example of research into several or more study skills conducted with a very large sample is shown by Delores Tadlock in SQ3R, Why It Works....(1979). She focuses her attention not on the study skill itself, but in seeking to explain what mental processes are involved when SQ3R is used. She feels that it is not enough for students to be taught SQ3R and what to do in each step, or for students to be told that it works. They must understand why SQ3R works. When students underststand why SQ3R works they will more likely use it in their individual study. Each step in the SQ3R has its place in aiding retention. 'Survey' prepares the mind to receive incoming information. 'Question' demands that the individual think about what is not known, as well as what may already be known. In 'reading' the student chooses that information which is needed to fill in gaps in his or her knowledge. 'Recite' requires that the individual read actively and also gives a chance for the information to be transferred from short to long term memory. 'Review' aids in the recall process and enables greater retention. Therefore, students should not only understand the mechanics of SQ3R, but should also be helped to see the place each step has in the memory retention process.

A study which bears memtioning here is one called Reading Skill and Memory Scanning by Kail and Marshall (1978). They tested the hypothesis that those with different reading levels vary in the rate in chich they search and compare items in their memory. They conducted a series of four

controlled experiments with young students. They read one to three statements followed by a question. As a result of their study the authors state the following: "The difference in the rate of memory search is the manner in which information is encoded originally in working memory" (Kail and Marshall, 1978, pp. 808-814). This would tend to lend credence to the Tadlock (1979) article on SQ3R.

Several studies fit into the second type of research into several or more study skills conducted with a very large sample. Annis and Davis (1976) did research on The Effects of Study Techniques and Preferences on Later Recall. Two hundred fifty-eight college students were asked to indicate their preference:read only, reading and underlining, reading and note taking. Students were given an article to read. One-half of the group was assigned their favorite method, and the other half was a method they did not choose. A week later they were given a chance to review. The read only group used the article only, the underline group was given the article they had underlined, and the note taking group was given their notes only. A test was given which included multiple choice and essay questions about the article. The information gained showed that the results were related to familiarity with material read, as well as personal preferences in a particular skill.

Annis and Annis (1979) later did A Normative Study of Students Preferred Study Techniques. The study involved three age groups: grades 6-8, grades 10-12, and college. A total of 914 students participated. Each student was given a study technique questionnaire. Results were

tabulated into one of nine general catagories from reading only to note taking and outlining. It was discovered that "reading only" decreased as a study skill choice with the increase of grade level. In grades 6-8 some 60% preferred to read only; in grades 10-12 some 47% chose this option; but amone college students, only 13% chose the read only method. The authors suggest this is due to two factors: (1) as the complexity of the reading matter grows, the more actively involved the student must become in the process, (2) and with age studens tend to have more of a preference in the type of skill they use.

Given the wealth of materials on how to teach specific skills and knowing that they are important, what guidelines are then provided for the teacher? How can the right skill be taught at the right time? How can a teacher be sure that students are getting the skills they need. The third type of research offers many suggestions for implementing study skill instruction in the classroom.

Many, including Copobianco et al. (1977) suggest that a checklist of skills which need to be learned be kept for each student. These can be marked excellent, satisfactory, or needs attention. Keeping a master list would enable the teacher to see at a glance where a class is weak and which skills need strengthening. Copobianco suggests some twenty skills which include such skills as:

1. shows ability to locate selected details
2. recognizes purpose for reading various materilas
3. locates topic sentence and main idea

4. can take meaningful notes

5. can outline

In Let's Teach Reading Better....by Laura Bursuk (1976) are included some twenty suggestions on specific skills. Six of the most important are included here:

1. teach skills in appropriate developmental order
2. all activities in a lesson should focus on the development of a specific skill
3. review of old skills should be incorporated into lessons on new skills
4. provision should be made for ongoing evaluation
5. proceed at pupil's rate of learning
6. teach a little thoroughly, rather than a lot superficially

Though the classroom is generally considered the place where skill teaching occurs, this is not the only alternative, as Barbara Kapinus (1981) points out. Since many skills are needed in several content areas, she suggests miniclinics as an alternative. A specific skill such as outlining or graph reading would be taught during a lunch period, or the student would be released from his regular class for a brief time to participate in the clinic. Students are given credit for their regular classwork while attending the miniclinic. Students from various content areas have an opportunity to gain a needed skill. Though enrolment would be limited, the clinic can be designed to fit the needs of those students attending. This kind of approach has several advantages. One is that very little stigma is

involved since anyone needing a skill can participate. Because they are of short duration, miniclics can be scheduled almost anytime and anyplace. Miniclinics can be done with very little need for extra money.

And finally, Lowell Eberwein (1978) suggests Twelve Practical Questions On Skills Instruction. Because they seem to be crucial as well as well as practical, they are listed here in their entirety:

1. Is the skill essential to the student's progress in reading?
2. Is the student's performance on a skill below an acceptable level of mastery?
3. Does the student avoid using the skill in a variety of situations?
4. Does the reading skill include sub-skills that are important to to the mastery of the general skill?
5. Is there enough challenge to facilitate learning and yet enough success to keep the student motivated?
6. Does the activity elicit maximum student performance?
7. Are the directions clear enough?
8. Does the reading activity assist the pupil with applying the skill?
9. Does the learning climate facilitate maximum student performance?
10. Does the pupil need additional incentives to maximize performance?
11. Is the student's performance at an acceptable level of mastery?
12. Does the student use the skill in a variety of reading situations?

These authors seem to suggest that such questions and checklists enable the teacher to approach skills teaching with confidence and enthusiasm.

In summary, research has shown that study skill instruction is an effective tool in the development of reading comprehension proficiency. Research has also shown that teaching of study skills, at each and every level, can not be neglected if students are to get the most benefit from instruction.

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The Effects of Bibliotherapy on Self-Concepts and Attitudes in a Classroom Situation

by

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A paper presented at the

Third Symposium of Reading

Sponsored by

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The Effects of Bibliotheraphy on Self-Concepts and Attitudes in a Classroom Situation

by

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ABSTRACT

Bibliotheraphy is not a new concept. As far back as ancient times, bibliotheraphy concepts have been recorded. Ancient libraries had inscriptions such as "Healing Place of the Soul" or "medicine of the Mind." Early nineteen century physicians recommended books to help the mentally ill. In 1962, an entire issue of "Library Trends" was devoted to bibliotheraphy.

This paper discusses seven studies utilizing bibliotheraphy, and its effects on self-concepts and or attitudes. Procedures and findings are briefly stated and compared. Also included are brief description of bibliotheraphy and recommendations in implementing a bibliotherapuetic program in the classroom.

The Effects of Bibliotheraphy on Self-Concepts and Attitude in a Classroom Situation.

Bibliotheraphy is simply defined as treatment through books. Yet a more thorough definition as defined by Webster's Third Dictionary is "A process of dynamic interaction which may be utilized for personality assessment, adjustment, and growth." Using books to help solve problems is not a new concept. In 1962, there were well over 300 works on bibliotheraphy going back as far as 1900 (Warner, 1980). In the 1900's physicians recommended books to help the mentally ill.

In the 1950's and 1960's, bibliotheraphy went beyond the confines of hospitals and psychiatric clinics. Preventative bibliotheraphy bloomed to include reading that may somehow prevent future problems. Educators took a hold of this idea to help students adjust and cope with the complex social values. This trend also inspired teachers and librarians to examine books that relate to issues such as broken homes, racial discrimination, sex, drug abuse, and alcohol.

There is a general consensus that bibliotheraphy is categorized into three groups. One category is the medical group, medically selected readings utilized by medical personnel to help a patient resolve emotional or other problems. Another category is the social group. This is used by social workers to help their clients adjust to their environment. Counseling and guidance are supplemented into this program. The last category is the educational group. Selected readings are used to change attitudes, behaviors, and influences.

The bibliotheraphy process consists of three elements, identifica-

tion, catharasis, and insight. In bibliotheraphy, one must identify with the book. Then one must share feelings and motivation with characters (catharasis). Finally one must deal with the situation or problem (insight).

There have been numerous studies on bibliotheraphy. Warner 1981 reviewed the Disertation Abstract International since 1969 and reports 28 doctoral theses on bibliotheraphy. Of these 28 theses all but one were controlled experiments.

In ten of these studies, according to Warner, bibliotheraphy was not found to be successful. Two studies did not translate to changed behavior. Four other studies had other techniques more successful. Another four studies had good results but subjects had knowledge of problems and had desires to change. In all, only two claimed total success.

In one study, Dixon, 1974, bibliotheraphy was utilized to inyestigate effectiveness of group reading therapy on self-concept, anxiety, and behavior. Seventy two fifth and sixth grade students who were low achievers in reading were used as subjects in this study. These students were central city pupils and were matched on the basis of reading, chronological age, and I.Q.

Five experimental groups were formulated as follows;

1. Bibliotheraphy and reading
2. Study skills instruction and reading
3. Group counseling and reading
4. Reading conducted by reading therapist
5. Regular classroom reading

The hypotheses were described as follows:

1. The results from the bibliotheraphy would be superior to the regular classroom reading.

2. Those receiving group counseling and reading would be superior to all four groups.

3. Criterion variables were reading, self-concept, anxiety, and school personal-social behavior.

A pre-test and post-test of the Winnetka Scale of Rating School Behaviors and Attitudes was administered to all groups. Post-test of the Iowa Tests of Basic Skills, Form 1 - Reading Comprehension, Children's Form of Manifest Anxiety Scale and Coopersmith Self-Esteem, Form A. Inventory were given to both experimental and controlled groups.

The data indicated at the end of the experiment that the bibliotheraphy group did not differ significantly with the regular classroom reading group. The treatment group and the counseling group, and the reading group did not differ. No treatment group showed any significant advantage except that the bibliotheraphy group had a significantly higher reading achievement.

Fehl 1969, used 420 sophomores, juniors, and seniors in an extensive study to explore the influences of reading on concepts, attitudes, and behaviors. These students were from two different public high schools in Tucson, Arizona.

A "modified critical incident" technique was used as a basis of data collection. This was done to procure self observation of one's behavior. A questionnaire was utilized to obtain these data, interviews and case studies were done to supplement the data collected from the questionnaires.

The findings in the main study revealed readings influenced concepts,

attitudes and behavior. Only 16 of the 420 students reported no influences from reading. There were 1,184 influences reported. Of there, 40% were attitudes, 45% were concepts, and 15% were behavioral responses. Of the responses reported, most were single items and about 1/3 were combination of concept, attitude, and behavioral responses.

Roach 1975, researched the effects of realistic fiction literature upon self-concepts of elementary school students exposed to a bibliotheraputic situation, using eighteen classes of fifth and sixth grade students.

First five realistic fiction books were read to the class by their teacher. Next three treatment groups were formulated. Treatment class I, had group discussions following the presentation of the books. Treatment class II, had only presentations without the discussions. Treatment class III, did not have exposure to the books.

The Literature review was classified into two general subjects, development of self-concept in terms of motivation and learning and general effects of reading on self-concept.

The study found three of the fifteen hypotheses had a significant difference at the .05 alpha level. Seven of the eighteen hypotheses had a significant difference at the .05 alpha level using t-test of statistical difference.

Kaan 1975, explored the effects of bibliotheraphy in resolving peer acceptance problems in a group of fifth grade students. These students had peer relationship problems and weak self-concept. Tests were administered in these two areas to identify candidates for the study. Selection was also reinforced by the teachers judgement.

Additionally only students who desired to participate were included.

Five fifth grade students were chosen to participate as a subgroup for a six week period. They were exposed to materials dealing with poor self-concept and weak peer relationship. The interaction was informal and open ended.

Students read and discussed books using guidelines prescribed by the researcher. This was done to allow identification with certain characters and situations in the readings most meaningful to the subjects. This procedure was audio-recorded for feedback interpretations. Another questionnaire was given to enable subjects to evaluate literature read.

Findings showed some evidence in support of the bibliotheraphy subjects. A mean gain of 9.8 for the bibliotheraphy subjects was compared to the 2.2 mean gain of the regular class. The mean gain for the instructional group was 2.0 compared to .14 of the non-treatment group. Comparisons for the non formal data collected in the study, audio-recording, questionnaires, and discussions suggest that the subjects' reactions to bibliotheraphy were positive.

The effectiveness of bibliotheraphy on self reliance was researched by Stephans 1974. The study focused on some developmental problems of adjustment and growth. Thirty six sixth grade students from ages 11 through 13 were given pre and post-tests, the California Test of Personality and the Teacher Rating Scale. The subjects were classified into three groups. The three groups are, bibliotheraphy group, the recreational group, and the control group.

The bibliotheraphy group was given prescribed books for the purpose of promoting self-reliance. The recreational group had periods

to read what they desired. The controlled group did not haye any prescribed books or recreational reading periods.

Findings revealed that the bibliotheraphy group had higher mean adjusted post-test scores than the other two groups, but the differences were not significant.

Bibliotheraphy's effect on racial attitudes was researched in an exploratory study by Hayes 1969. The experiment used 34 males and 23 females in an eleventh grade class. Nine books were prescribed on the assumption that if racial prejudices did exsist, students reading will result in the reduction of prejudicial attitudes. These books were of mixed genre, six fiction and two non-fiction, and one photo essay.

The results indicated in the study were:

1. Readings of selected words of a literary nature about blacks changed subjects attitudes significantly.
2. Direction favorable to the blacks.
3. Males had a significantly greater improvement.
4. Females showed some gain but results were not significant.

The researcher had knowledge of the variables that may have affected the results. The number of participants only totaled 54, therefore no generalizations could be made. External influences were present such as parental concern and media coverage.

Zentner 1974 investigated if the effectiveness of bibliotheraphy on self-concept would correlate positively with reading ability. This study was a follow-up of the researchers earlier investigation in 1972.

College students were subjects of this study. Students were divided into three groups according to their reading ability, high,

medium, and low. Treatment consisted of what the investigator refers to as bibliotheraphy agents, Man's Search for Meaning by Victor Frankl, against a travelogue Southeast Asia by Herbert Zim, and a no treatment control group in increasing reported self-concept.

The findings revealed no significant difference between travelogue book group and the no treatment control groups in reported self-concept. There were no significant differenct between the bibliotheraphy agent groups and travelogue groups. Significant differences were found between the bibliotheraphy group and the no treatment control group in reported self-concept.

Seven different studies were reviewed in this paper pertaining to bibliotheraphy and its effects on self-concepts and attitudes in a classroom. Procedures and findings were briefly stated. All seven studies utilized standardized tests, and/or personality tests. Examples of such tests are the Nelson-Denny Reading Test (Zentner 1974), the New Addition Gamma Test (Hayes 1969), the Iowa Basic Skills Test (Dixon 1974), and the California Test of Personality (Stephans 1974). Various scales were also utilized in these studies. Examples of such scales are, the Harris Self-Concept Scale (Kaan 1975), the Children's Form of the Manifest Anxiety Scale (Dixon 1974), and the Tennesse Self-Concept Scale, (Zentner 1974).

Of these seven studies, five found positive results, Fehl 1969, Hayes 1969, Kaan 1975, Stephans 1974, and Roach 1975. Two of the studies recognized the limitations and variables that affected their studies. Roach 1975 states, "One major conclusion is that the teacher makes the difference."

Hayes 1969 reveals limitations were imposed. Such limitation

included are, only 54 students participated in the study, external influences-parental concern and the presence of the media, and this study was only to one academic junior class in one urban high school.

In all only two studies did not find any positive significant results using bibliotheraphy, Dixon 1974 and Zentner 1974.

In summary, bibliotheraphy is one of the many methods available to educators in positively modifying one's poor self-concept and/or attitudes. Because students today face a more complex society, and deal daily with issues such as drugs, alcohol, sex, racial prejudices, and child abuse, bibliotheraphy becomes an even more important method to help students develop.

Lehr 1981, gives four recommendations for the success of a bibliotheraphy program. The first recommendation is to determine the needs: Find out what the problem is. Second, choose the appropriate book. The selection of the proper text needs to be carefully examined. Third, one must keep in mind the book should appeal to the subject. The student must like the book if it is to be read. Fourth, know the limitations of the program. Despite the fact some researchers have shown bibliotheraphy has positive results, it must be kept in mind that it is seldom a clear workable program and there are many factors that can restrict its success.

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The Importance of Interest as a Motivating Factor of Reading Habit

(How To Make a Horse Drink)

by

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A paper presented at the

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Abstract

"You can lead a horse to water, but you cannot make her/him drink." The same thing can be said about children and books. The importance of reading cannot be over-emphasized. As an inreasing number of non-readers are being reported today, teachers face a task of developing students' reading habits as well as their reading skills. This paper reviews literature that has dealt with ideas and techniques to help teachers to motivate students to read. The sources used include books and journals that have been published in the field of study related to reading interests and habits. Motivation is in hands of teachers. Can teachers make a horse drink? The answer is in their hands.

The Importance of Interest as a Motivating Factor of Reading Habit

"You can lead a horse to water, but you cannot make her/him drink." The same thing can be said about children and books. The best collection of books and the most attractive libraries do not mean anything to a child if she/he is not interested in reading.

Various studies (Cleary, 1972; Unesco, 1975) in the field of reading reveal that the number of non-readers increases every year. Schools are producing more and more students who can read but do not read. These students are quite capable of reading; and yet, they never take the opportunity to read for pleasure. Adults are no exceptions. In a survey in which respondents were asked if there was any book they particularly wanted to read, a high percentage answered "no." In another survey a sampling of population was asked "Are you reading a book now?" Eighty three percent answered "no." (Cleary, 1972).

The importance of reading cannot be overemphasized. Reading enables the students to get more out of school, and out of adult life than any other single skill and habit. Especially today when science and technology are progressing at such a rapid rate, schooling alone is not sufficient. In order to keep up with new information

everyday, people are faced with life-long self-education. It seems that one of the most immediate tasks for teachers today is to ensure that individuals who can read will read. Teachers frequently test to see if a student knows how to read, and then they wrongly assume that once a students acquires the skills to read, he will spend his leisure time reading. Teachers must ensure that a student acquires the tendency to read as well as the capacity to read.

The purpose of this paper is to review literature that has dealt with ideas and techniques to help teachers stimulate their students ro read.

Carol P. Carter (1981) says that unsuitable reading materials often ruin students' interest in reading. In her article, "Where Do I Begin"?, Carter stresses the importance of selecting suitable reading materials to students. If teachers want to help develop students into life-long readers, they must first provide successful reading experience for them. Therefore, Carter argues, the first thing teachers should do is to select reading material that will provide the opportunity for the students to be successful. The taste of success will cultivate a further desire to read.

In order to select suitable reading material, teachers need to kn ow the students - their age, abilities, and

emotional and physical experiences are important factors. Unfortunately for the students classroom selection is ordinarily based on some standardized notion of what the students "should read." This sometimes creates a situation where the students are forced to read a selection which is beyond their ability. They easily lose interest in reading, and what is worse, their self-confidence and self-esteem will be hurt. They may never learn to like reading. The students will develop little pleasure in reading if reading if difficult for them. The selection of material should be based on current ability of students to read, understand, and participate in school work.

Marion D. Jenkinson (1964) states that interest should occupy a central place in the reading program since interest is one of the most potent motivating drives. Psychlogy of learning suggests that learning is most successful when the learner is involved cognitively and emotionally in what she/he is doing. If a book does not have any meaning, a child will tend to lose interest in it. Jenkinson suggests that it will be helpful for the teachers to have a general knowledge of reading interests.

Studies of reading interest reveal the tendency to read books typical for a certain age (Unesco, 1975).

1. Picture book and nursery rhyme age (from 2 to 5 or 6)

2. Fairy tale age (5 through 8 or 9)
3. Environmental story age or the "factual" reading age (9 to 12)
4. Adventure story age (12 to 14 or 15)
5. The years of maturity (14 to 17)

Although a generalization of this type should not be accepted unquestioningly, it can at least give teachers some ideas about where to look more closely for books to capture the interest of students. If informative reading is scheduled too early, at a time when students primarily seek lively, fanciful stories, they will show resistance to reading. Students at the adventure story age are often forced to read a great deal of classical literature, making great demands of the students' aesthetic understanding which may not be fully developed.

In order to obtain more precise interest profile of individual students, Jenkinson also suggests that teachers be familiarized with one or more interest-assessment techniques. It will become possible to introduce suitable books, stories, and articles to a student only when the teacher recognizes what a student likes to read. And when a right book is matched with a right students, the result will be encouraging both for the student and teacher.

Sharon Harris says that the priority is to get students to read.

> The more they enjoy reading, the more they will read. The more they read, the better their skills will become. The better their skills become, the more they enjoy reading, the more they will read, and so the cycle continues (Harris, 1981).

According to Harris and many other reading specialists, reading skills and interest will go hand in hand. The important thing is to expose the students to books. Harris says that any enthusiastic teacher can help the students develop interest in reading with the help of some creative ideas that will reinforce reading habits. The excitement of receiving reward will lead students to more readings.

Donald R. Gallo (1981) wrote an article, "You Are Reading That Book"? In this article he stresses the importance of teachers demonstrating interest in reading and sharing reading experiences with the students. He says that it is important for teachers to show the students that they value and do reading themselves. Unfortunately, many teachers are non-readers. However, if teachers want students to like to read, they themselves have to like to read. Teenagers are quick to notice inconsistencies in the statements of adults. Teachers will have little success in motivating reading if they do not themselves read. Teachers should talk informally about books, stories and articles that they are reading or have read. They should keep books or magazines at their desks and read during free moments. The students often identify themselves

with people who are close to them. If they identify with a person who likes to read, their reading habit will be favorably influenced.

In a paper, "Motivating Reading In Secondary Classes," David Memory states that if teachers are to halt and reverse the decline of reading achievement, they must try to make reading attractive. Reading achievement, he says, can be improved mainly through extensive reading - reading that students must do themselves. However, students today are lured into more attractive alternatives than reading: After-school and weekend jobs, television programs and alchohol and drugs to name a few. Schools and teachers must compete with these non-school activities and distractions.

The first thing that teachers can and should do, David Memory continues, is to make subject-related books and magazines actually available in the classroom. This classroom library serves as a quick information center and saves time to visit a library for the students who are busy with many other activities. Easy access to the books provides more opportunities for student to read.

Teachers should also have available in the classroom a wide variety of appealing information about subject-related books. Information of this type is available in the forms of pamphlet, catalog and book jackets. Teachers

can collect and display them in the classroom. Book jackets, for example, are usually designed to sell books, andand their attractive appearance will generate students' interest in specific books.

In her article, "RIF + USSR = R.E.A.D.," Diane A. Ball describes a highly successful reading program called R.E.A.D. - Reading for Enjoyment and Development. R.E.A.D. has been practiced for three years now in one of the junior high schools in Ohio. R.E.A.D. is a program that combines RIF - Reading is Fundamental and USSR - Uninterrupted Sustained Silent REadeng.

It is explained in her article that RIF is the contract agent for the federal grant program "Inexpensive Book Distribution Program for Reading Motivation." Currently this law authorizes funds to promote reading motivation and continuation of the program through 1983. The program enables the purchase and distribution of inexpensive books to students. The concept of USSR is simple. Everyone in the school building, i.e., the principal, teachers, students, custodians and other personnal, participate in silent reading during regularly scheduled times. No other activities take place during these periods.

The books purchased through RIF are distributed to the students and are read during the uninterrupted silent reading time. Ball reports that the program is surrounded

by a very good feeling and supported by both the students and staff. At the survey 71% of the students reported that they read more books during the R.E.A.D. program than formerly, and 59% reported an increase in their reading for pleasure.

Reading for enjoyment is urged by many others. (Memory, 1981; Smith, 1963) Unfortunately, many students believe that reading is only important for the grade, that it is boring and has nothing to do with real interests. Once these students leave school they may never pick up books again for the rest of their lives. Teachers must teach the students that reading is fun. To do this, David Memory (1981) suggests that teachers include during class time some activities related to voluntary reading. Teachers may allow the students to read whatever they wish. This allocation of time for free reading may lead students to more readings and help develop more positive atitiudes toward reading. It is hoped that non-readers and reluctant readers will realize through free reading that innteresting and rewarding reading materials do exist.

The practice of reading during the scheduled periods also helps to regulate students' reading habits. Habits are formed only through regular activity. So is reading habit. It is better to read for fifteen minutes every day than half an hour every other day. It is better to read for

half an hour every other day than an hour once a week. Regular practice is the prerequisite for habit-forming.

The pleasure obtained from reading is boundless, and all students deserve the chance to discover this for themselves. Helping students develop an interest in reading is one of the most beneficial things that a teacher can do. The books and articles reviewed in this paper present various suggestions for improvement of reading habit. No approach is effortless either for the students or for the teachers. No approach is a certain solution to the problem. However, teachers must realize that they are one of the most influential people in the students' life and that students motivation to read is in their hands Can teachers make a horse drink? The answer is in their hands.

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The Motivational Effects of Material Rewards or Reinforcement Toward Reading

by

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The Motivational Effects of Material Rewards or Reinforcement Toward Reading

by

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Abstract

The task of motivating children to read is the responsibility of their teachers. It is a difficult because one must consider individual interest and achievement. We all can safely say that we want our children to be intrinsically motivated toward reading; that is to read for the sake of reading itself. But considering that many children cannot read, can we motivate them to achieve and enjoy reading through material rewards or reinforcement?

In classroom situations, many studies have been conducted using material reinforcement models to modify some pupil's deviant behavior or some behavior disruptive to the whole class. This paper will review the literature and attempt to find the values of material rewards or reinforcement in motivating children toward reading.

The Motivational Effects of Material Rewards or Reinforcement Toward Reading

Motivation is one of the keys of success. Some of us are internally motivated without regard for material gain and some of us need explicit material gains to become motivated. Can material gains motivate our children toward reading? There is a need to identify, develop, and compare means by which children are motivated to learn to read.

How are children motivated? Children are often positively reinforced by their parents' attention and approval or teacher's praise. How many times have we said, "Good job!" or "I'm so proud of you." Children are usually self-motivated when they achieve at a high success rate. But when a task becomes too hard to achieve any success, verbal reinforcers may lose their effectiveness. Thus another method of reinforcement is needed.

Parents and teachers use material rewards to motivate children. We often give toys and candies to children and some parents use monetary rewards to motivate their children. Can we apply material rewards and successfully motivate children toward reading? Several studies have shown positive gains in reading with the use of material rewards or reinforcement.

Out of ten studies reported in this paper, 6 studies showed positive results wherein a material reinforcement system did aid in accelerating some reading achievement or performance.

The literature has revealed many studies that implement a token system in the area of behavior modification. A token system involves rewarding the subject with a token which is exchangeable for a tangible reward.

Hamblin (1971) and Moss (1974) both used token reinforcement procedures in investigating the effects on reading.

The purpose of the Hamblin (1971) study was to develop and evaluate a method of teaching reading which makes early learning to read easy for the disadvantaged preschool child.

The subjects were VISTA preschool children attending a summer session. Tokens were given to the children as "earnings" for learning the symbols and words and, by successive approximations, for reading the story line. The tokens were later exchanged at the end of the reading session for material rewards such as cookies and small toys. A peer and adult tutoring system was used as the basic teaching procedure.

The results showed a positive effect of the use of the token system supplemented by peer tutoring. In this study, the findings indicated that the children on both peer tutoring and token exchange for reading scored high. The high-to-medium I.Q. children read about four times more and the low I.Q children read about 1.2 times more than the high-to-medium children who did not have the peer tutoring or tokens for reading.

Another token reinforcement model was employed by Moss (1970) to determine whether reinforcing children's correct reading responses with tangible and material rewards would accelerate their achievement to a greater degree than by giving them only intrinsic rewards.

The subjects of the experimental and control groups of this study involved ten children in the low group of readers in the third grade of Asbell School, Fayetteville, Arkansas.

During the lessons members of the experimental group were rewarded one token for each correct response in word study, oral reading, and on written exercises.

The findings of this study indicated that reading achievement of

children could be significantly accelerated by the use of reading programs which uses token reinforcement. The children in the experimental group yielded significant greater gains in their vocabulary and in their composite than the children in the control group. The experimental group also made greater gains in comprehension than the control group; however the gains recorded in this study did not reach a degreee that was statistically significant.

A review of the literature revealed two studies that shared similar results in their research and method. Benowitz and Busse (1970) and Galloway and Thomson (1970) both worked with children in normal school situations when they researched the area in material reinforcement and its effect on spelling proficiency. In both studies, subjects who received the material reward also received a social reinforcer, whereas the other subjects received only the social reinforcer.

Benowitz and Busse (1970) used the Wilcoxon matched-pairs signed-ranks test to compare the mean number of words spelled correctly for boys and girls in the material reward condition and in the control condition. The results showed that for both boys and girls, the material reward condition produced significantly higher scores than did the control condition.

The results found by Galloway and Thomson (1970) indicated that a continuous schedule of material reinforcement paired with social reinforcement provided for correct spelling responses seems to show an increase in children's spelling proficiency as measured by weekly spelling tests.

Another feature of the Galloway and Thomson (1970) study was to find whether the improvement can be maintained in the absence of material reinforcement on a continuous basis. A comparison of the spelling scores indicated that the spelling proficiency did not decrease when the

material reinforcement was changed from continuous to an intermittent schedule. In fact, the results revealed a higher performance when material reinforcement was provided intermittently. Students who initially had low spelling scores increased their scores significantly when the reinforcement was changed from a continuous to an intermittent schedule. A trend towards more proficient spelling performance was correlated with the change from continuous to intermittent material reinforcement.

The data from this study support the idea that academic achievement, at least as it relates to spelling for students in a regular classroom situation, can be increased through the use of material reinforcement combined with social reinforcement.

The data also suggest that material reinforcement is not necessarily required on a continuous basis to maintain increased pupil proficiency.

The effectiveness of reinforcement among ethnic goups was studied by Bowles (1972). The purpose of the study was to test the effectiveness of reinforcement menus for promoting reading behaviors.

Subjects were fourth, fifth, and sixth grade students enrolled in regular Summer School reading classes. All subjects were initially ranked by reading test scores from highest to lowest levels and then matched on the basis of similar reading levels and randomly placed into experimental or control group classes.

In order to be exposed to the reinforcement menu, one had to be engaged in specific reading behaviors during a daily 60-minute reading period and present a bookslip listing the title and author of a book read at home or at school. Six teacher aides administered the reinforcement procedures during the reading period.

Findings of significance to this paper showed that subjects involved

in the reinforcement procedure demonstrated a significant increase in the percentage of students engaged in reading behaviors during free choice class time over three observation periods. Subjects who were in the control situation did not show a similar increase. The experimental group subjects read more books during the treatment period than did the subjects in the control group. Non Spanish surname and female experimental subjects also read more books than their counterparts in the control group. However, differences in the reading ability levels of the two groups were not significant.

Noteworthy to mention is the fact that the culturally appropriate reinforcers for Spanish surname subjects were identified as significantly important, compared to reinforcers in general (Bowles, 1972).

Lastly, a study that resulted in positive measures in the topic of this paper was done by Blom and Feldman (1981). The study examined the relationship of interest in story content, material incentives, and reading level to elementary school childrens's reading performance.

Two incentive conditions were set. The first one was devised to be a projecting motivator, using a criterion contingency. The reader was told that a reward would be given after he or she read each paragraph.

In the incentive control condition, the reader also received a reward but without an established criterion for correct answers.

The subjects involved were a group of 75 fifth-graders in an urban Hispanic neighborhood. The children who were all adequate English speakers were selected as being average or below-average in their teacher's estimate of reading level.

The findings showed two main effects, with a significant reading level effect, showing that below-average readers were scoring higher, and a significant incentive condition effect with the reinforcement group

scoring higher. No main effect for interest was shown. Children reading higher-interest materials did not show higher comprehension scores than those reading low-interest materials.

The findings support the study's hypothesis that external incentives increases the reading performance in both average and below-average learner. Comprehension scores increased under external reinforcement conditions. Blom and Feldman (1981) suggest though that it is not the reinforcement per se, but the meaning implied by the reinforcement, since the reinforcement was contingent upon a set criterion. The examiners quote (Bandura, 1977) that if the meaning implies competency or skill, it will increase a person's level of interest in the subject matter as well as his or her quality of performance.

Despite its exploratory nature, the study has strongly suggested that contingent reinforcement enhances reading performance for both average and below-average readers (Blom and Feldman, 1981).

Most studies seem to suggest that children, in general, will respond better to material reinforcement than they will to social reinforcement. Several studies also suggest that disadvantaged children are more dependent on material rewards. These studies suggest that the ordinary social rewards given in schools are not enough for these children.

However, several researcher have shown negative responses to material reinforcement. This section of the paper will present the negative findings.

One such study (Pikulski, 1970) attempted to find if there were differences between lower and middle class children in their exposure to various reinforcement during sight word presentations.

The sample comprised of 24 chilren, half boys and half girls, chosen from the kindergarten classes of school attended mostly by a Black population from lower socioeconomic backgrounds. Twenty-four children

were also selected from a school attended by middle class white children. The average I.Q. score was 85 for the lower socioecomic group and an I.Q. score of 102 for the middle class children. I.Q. scores were derived from The Peabody Picture Vocabulary Test.

The children were formed into three different reinforcement groups. They are: the knowledge of results group, social reinforcement group, and the material reinforcement group.

The main findings of the experiment revealed that middle class, kindergarten children scord better when they were rewarded socially with verbal praise and smiles, following a correct response. Even though the knowledge of results reinforcement produced inferior scores, they made more errors when candy was given as a reward. It was thought to be that the candy was more of a distractor than a reinforcer and thus, contributed to the poor performance. The lower class subjects yielded different results in that boys and girls responded differently to the reinforcement. The boys in the lower level did not respond as well to social reinforcement as did the middle class children.

The results did not support the thesis that material reinforcement, in this study candy, would produce significantly higher gains than social reinforcement.

A study conducted by Benson (1970) used monetary rewards to explore the effects on remedial reading students's reading ability, attitude toward reading and self-concept of ability and school achievement.

The subjects included were four classes (two experimental and two control) with 55 ninth-grade students and two teachers, which were studied for one semester. Two of the groups were evaluated an extra semester with the students being compared with themselves for reward and nonreward conditions. Students who achieved "A" grades in oral and

written assignments were given sixty cents a week and were deducted fifteen cents for any grade lower.

The two classes studied for two semesters tended to make gains during the nonreward conditon and to decrease gains during the reward program. We can presume that the nonreward conditions were preferred over reward conditions. Benson (1970) states that perhaps students viewed the reward system as a punishment when they did not receive the full amount each week or when they expected a higher amount of reward than they actually received.

Heitzman (1970) also using the token reinforcement investigated its effect on reading skill learning of migrant primary school students enrolling in a summer school program.

A group of 94 Black and Caucasian primary school children (55 of the Token Subjects and 39 of the No Token Subjects) were studied.

The token subjects received a token when they demonstrated reading behaviors such as word attack skills, word recognition, and a variety of comprehension skills usually presented in the accompanying workbooks.

The findings did not establish a relationship between the number of tokens received per subject and the reading skills achieved. The Black and Caucasian primary school students responded differently to the tokens wherein the Black students particularly accrued some positive effects.

Lastly in the findings of negative results of tangible reinforcements is the work of Charen (1973) whose study involved urban, retarded readers. Since motivation is lacking in most low-performers, this study hoped to find that perhaps motivating these students with tangible rewards might improve their reading proficiency. It was hypothesized that significant greater gains would occur as a result of the experimental treatment (Charen, 1973);

Sixty-four retarded readers were randomly assigned to experimental or control groups selected on the basis of pre-test scores, sex, and grade. Two reading teachers each of whom taught two experimental and two control classes of eight students per group, provided the instruction along with systematic reinforcement procedures.

Points were given on a "variable ration schedule" (Charen, 1973) for correct oral and written responses to teacher-made materials. Points were redeemed for tangible rewards by student's choice from a wide variety of games, toiletries, sports equipment, clothing accessories, and edibles.

The student's age, degree of reading disability, and amount of points earned were identified but there were no significant correlations with tangible reinforcers.

The findings derived from the analysis of covariance indicated no significant main effect for the experimental treatment. The teacher tests showed no significant differences between experimental and control groups in thirteen of the fourteen t test comparisons. One t test showed positive measures for the experimental group.

The data clearly show that the tangible rewards did not significantly affect the reading improvement in urban retarded readers.

In summary, material rewards did have a positive effect on toward reading on many learners. Some of the significant results that support this concept are:

1.) Material incentives increased the reading performance for average as well as below-average readers (Blom and Feldman, 1981).

2.) Material reinforcement can be applied to a regular classroom situation rather than just for small groups or individuals (Benowitz and Busse, 1970 and Galloway and Thomson, 1970).

3.) Tokens, supplemented with peer tutoring had a very substantial effect on the average-to-bright inner city preschoolers (Hamblin, 1974).

4.) Material reinforcement need not be delivered on a continuous schedule to maintain increased pupil proficiency (Galloway and Thomson, 1970).

On balance, it appears to the present writer that material reinforcement systems can play a vital role as a motivational factor toward reading in the classroom. One must consider though, the variables of the student's age, sex, background, ability, plus the teacher's interaction and level of instruction. Appropriate and meaningful reinforcers should be used and finally, one must carefully observe if the material reward is actually reinforcing a specified behavior.

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The Principles of Brain Functioning in the Process of Reading

by

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A paper presented at the

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Principles of Brain Functioning in the Process of Reading

by

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The importance of effective reading is universally recognized. In schools and colleges, reading holds the key to academic success. In a complex society, reading enables one to expand his immediate environment of home and his commitment to the world as a whole. The importance of reading is reflected in the extensive amount of research activities in the area.

Research in reading has been voluminous, a majority of the studies focusing on practical aspects of input and output variables. Theoretical questions relating to processing variables have received less attention. The physiology and neurology of reading have been largely ignored. The brain has been taken for granted. This paper discusses two interrelated principles of brain functioning that have research implications in reading. The two principles may be called encephalic equipotential and hemispheric complimentarity and they influence reading which is a cognitive process of deriving meaning from written words, both linguistic and mathematical.

The role of the brain in reading as a cognitive process is unquestionable, but little is known about utilizing the resources of the brain to maximize reading efficiency. Science and humanities are discovering the powers and wonders of the brain that scarcely weighs three pounds yet sophisticated enough to handle the functions of thousands of computers. Although our knowledge of the brain is very limited and although, like the explorers of the new world, the brilliant brain researchers have barely made out the peaks and coastal lines and it is a matter of speculation as

to what lies in heartland, we know for sure that we use less than one tenth of our brain power and the other ninety percent is left untapped. Present research points out that we can now maximize control over autonomic and voluntary responses as well as cognitive and affective responses. We may therefore hypothesize that by tapping into the unused brain resources the effectiveness of reading would be improved.

Psychologically, reading is a mental process, a cognitive function for deriving meaning from written words, both linguistic and mathematical symbols. Reading specialists refer to this cognitive process as comprehension which depends on a number of factors such as word recognition, speed and flexibility of reading, and the intellectual skills of concentration, analysis, synthesis, and to some extent evaluation. Comprehension is best thought of as a continuum of shallow to indepth processing. Shallow processing centers mostly on certain linguistic and syntactic aspects of the written material with little attention to semantic structure and logical coherence. Indepth processing begins when attention is additionally directed to semantic and logical elements of the passage. Comprehension of the semantic content involves analysis of the components that make up the passage and synthesis which is both a recognition and reproduction of the organization of the semantic content. Generally there is also an evaluation of logical consistency and adherence to conventions of communication. Knowledge obtained from comprehension process, be it shallow or indepth, is stored in the long term memory either for retrieval or further processing. When knowledge is drawn for further processing, we refer to it as reflective thinking.

The problem of improving reading efficiency boils down to better comprehension, i.e., moving from the shallow to the indepth end of the continuum. The reader should concentrate so as to readily perceive and

recognize the linguistic and syntactic patterns in the written material. He should analyze the semantic structures and logical organization and synthesize them by way of reproducing his own semantic and logical structures. Finally, he should make an evaluative judgment on his own cognitive reproductions. Thus, concentration, analysis, synthesis, and evaluation are the key features of indepth comprehension. The principles of encephalic equipotential and hemispheric complimentarity appear to have implications on how well the mind can concentrate, analyze, synthesize, and evaluate information and achieve indepth comprehension.

Deikman (1971) proposes that human beings are organized in two modes of operation: a 'receptive' mode and an 'action' mode. The receptive mode is a state organized around intake of the environment. The sensory-perceptual system is dominant and the parasympathetic functions tend to be most prominent. The EEG tends toward alpha waves and baseline muscle tension is decreased. The receptive mode is aimed at maximizing the intake of the environment. The action mode is organized to manipulate the environment. The muscular system is dominant and the sympathetic functions are prominent. The EEG shows beta waves and baseline muscle tension is increased. The action mode is oriented toward manipulating the environment for personal goods. Muscular relaxation, cortical synchrony and sensory-perceptual dominance are principal features of receptive mode whereas muscular tension, cortical dysynchrony and muscular dominance characterize the action mode. We may well apply the operational dictomy of Deikman to mental processes in general and to reading in particular. The process of comprehension in reading corresponds to the receptive mode and reflective thinking after comprehension may be considered as similar to the active mode. What facilitates Deikman's receptive operation should logically

improve reading which is essentially an intake of informational environment. According to Deikman, muscular relaxation and cortical synchrony (that is, the various parts of the brain work in concert) are essential to maximize the efficiency of the intake mode.

From a functional point of view, we may consider brain as made up of three parts: The cerebral cortex, the limbic region and the autonomic brain. The cortex is the seat of conscious mind. It has two symmetrical hemispheres, each containing frontal, parietal, occipital and temporal lobes. The limbic brain is the realm of the unconscious. The largest structure of the limbic system is the U-shaped hippocampus which spans the underside of the cerebral cortex and is essential for learning and other cognitive processes. The amygdala rests at the end of the hippocampus and its stimulation can produce rage or euphoria. Thalamus and hypothalamus are generally included in the limbic region. Thalamus is the analyzer of sensation and switchboard to the cortex and hypothalamus is the center for motivation and emotion. The autonomic brain regulates the activities of the respiratory, circulatory and digestive systems as well as normal hemeostasis. The reticular activating system which alerts the entire brain system and thus is responsible for attentional response originates from nerve bundles in the brain stem and spreads all through the brain. Indepth comprehension in reading which involves concentration, analysis, synthesis and evaluation of the linguistic, syntactic, semantic and logical structures seems impossible without the involvement of the three functional units of the brain.

Lashley (1933) postulated that learning and thinking are the function of the brain as a whole. He further showed that memory and learning depend directly on the volume of functioning brain available. The more of

the brain is involved in cognitive process, the better the comprehension and reflective thinking. Miller (1972) refers to the role of the different parts of the brain in cognitive and perceptual processes as the principle of encephalic equipotential. It simply states that each part of the brain makes its own contribution to the perceptual and cognitive processes in man. Traditionally the analytic and synthetic functions of cognition were considered to be the work of the cortex of the left hemisphere. The principle of equipotential, while recognizing the role of the left hemispheric cortex, postulates the need for involving all parts of the brain in cognitive process. Carlson (1977) refers to this total involvement as "unity of consciousness."

The neurophysiological researchers postulated the need for involving all parts of the brain in the reading process. Reading researchers have unearthed evidence supporting the principle of encephalic equipotential from a different perspective. Holmes (1955) lists research studies supporting the devastating effects of stress-related emotional factors on reading competence. Emotion involves the limbric brain as well as the autonomic brain. Reading researchers have shown that both intensity and span of attention are important factors in comprehension. An attentive reader comprehends more than an inattentive one. Short attention span is a barrier to effective reading. The limbic region of the brain is particularly involved in the attention response. Thus they have indirectly shown the role of limbic brain in reading. Furthermore, researchers (Smith and Dechant, 1961) have shown that in reading analysis and synthesis of ideas in written messages are important activities and they are the domain of the cerebral cortex in the left hemisphere. Reading researchers have not so far paid any attention to the possible role of intuition, a

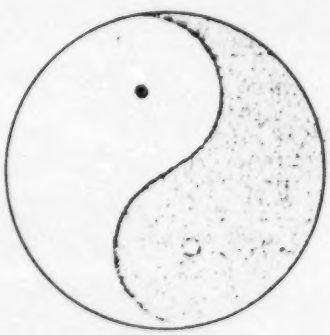
right hemispheric function, in the process of reading. Intuition is a holistic and relational activity and may be characterized as instantaneous as opposed to sequential in its mode of operation. Intuition might provide readers with yet another tool of information processing. If intuition is found to be important in reading, then the involvement of right hemisphere becomes apparent. Reading comprehension thus appears to be directly related to the extent the different parts of the brain are involved in the process of reading. It may safely be hypothesized that the principle of encephalic equipotential applies to reading effectiveness.

The second principle of brain functioning closely related to the first one is referred to as hemispheric complementarity by Ornstein (1972). According to this principle, information processing is more effective when the two hemispheres of the cerebral cortex complement each other. The left hemisphere processes information in an analytical, logical and sequential mode and the right hemisphere processes information in a holistic, relational and intuitive mode. The two hemispheres can function simultaneously and independently. They can also function in a complementary fashion and when they do, information processing is more effective.

There is an increasing recognition among scientists that scientific knowledge, largely a rational pursuit, relies heavily on intuition for completeness. Beveridge (1950) stresses the need for development of the intuitive side in scientists. He defines intuition as a 'clarifying idea which comes suddenly to mind.' Intuitive knowledge complements the rational scientific knowledge. Albert Einstein said of his own creative process, "The really valuable thing is intuition." Jerome Bruner (1962) states that psychological research "leaves an approach unexplored; it is a way that grows happy hunches and lucky guesses, that is stirred into connective activity by the poet and the necromancer looking sidewise rather

than directly; their hunches and intuitions generate a grammar of their own - searching out connections, suggesting similarities, weaving ideas loosely in a trial web...." Jerre Levy-Agresti and Roger Sperry (1968) have suggested that humans have evolved the hemispheric dominance of functions because the sequential information processing which must underlie language, mathematics, and rational thought is not readily compatible with the more simultaneous mode of information processing which underlies relational perception, orientation in space, and what our verbal intellect can only term "intuition." Perhaps it is the integration of the two modes of information processing, the complementary working of the intellect and the intuitive, which underlie our highest achievements. By stimulating the two hemispheres of the brain and bringing them to focus on reading, we may comprehend so much more than we presently do.

Eastern philosophical psychology recognizes and elaborates at length on the duality of reason and intuition. In Vedantic philosophy of India, a distinction is made between intellect (Buddhi) and mind (manas). This distinction resembles the separation of rational and intuitive modes of information processing. The chinese Yin-Yang symbol neatly encapsulates the duality and complementarity of the two modes of operation.



The Yin-Yang symbol.

There is also limited amount of experimental evidence. The experiment by Kinsbourne and Cook (1971) provides evidence for the complementarity of the two hemispheres. The subjects in their experiment were asked to balance a wooden dowel on the index finger of each hand while talking at the same time. Balancing on the right finger involves the left hemisphere and on the left finger involves the right hemisphere. Talking is presumed to involve the left hemisphere since language use has been localized there. The result of the experiment was that while talking, the balancing time decreased on the right hand and increased on the left. The increase on the left hand balancing with concurrent verbalization underscores the complementary nature of the two cortical hemispheres. The improvement in physical activity may not directly carry over to reading and information processing. However, it is suggestive of the hypothesis that the combination of logical rational information processing with relational, holistic and intuitive processing deepens reading comprehension.

The two principles of brain functioning suggest the hypothesis that the simultaneous and concerted involvement of the cerebral cortex, the limbic brain and the autonomic brain improves reading effectiveness. The question then is to evolve a method of synchronizing the activities of the three functional components of the brain while reading in the hope that comprehension becomes deeper.

Science has demonstrated that autonomic and somatic functions, individual and social behavior, emotional and mental reactions may be evoked, maintained, modified or inhibited, both in animals and in man by electrical stimulation of specific cerebral structures. Physical control of many brain functions is a demonstrated fact. Heaven and hell can be created within the brain by electrical stimulation. Hallucinations,

recollections and illusions can be evoked in the brain by electrical stimulation. The possibilities and limits of this control are still little known. Although electrical electrodes connected to the brain and to some small gadget we can carry around may not be an idea that will materialize in the immediate future, research on physical control of the brain clearly asserts the feasibility of brain control by other means. There is a lot of research on chemical or hormonal control of the brain. The relationships between blood lactate and anxiety, between adrenalin and excitability, between serotonin and criminality, between endorphin and euphoria are perhaps known to you. Brain as a chemical mechanism has got to be affected by chemicals. Nutritional deficiency has been demonstrated to have a devastating effect on intellectual development. LSD, marijuana and other drugs alter consciousness. Chemical control of the brain is indeed a fact; however, the day has not come when you can just take a pill and improve your concentration and comprehension.

What other method is available to influence and control the brain to maximize its efficiency? Brain researchers are finding that psychological approaches of relaxation and concentrative meditation seem to bring about the same changes as the electrical and chemical stimulation. Biofeedback research has demonstrated the efficacy of mind over matter. In short, the possibility looms large that we can at will change the electrical output or chemical composition of the brain by fairly easy methods.

The first step is phycial relaxation. Physical relaxation relieves the brain from the task of attending to the body. It is as though the body is idling in an automatic mode with little or no use of brain energy. With diminished demand the brain can direct all its energy on cognitive functioning. The next step is psychological relaxation which removes

distractions and enables the brain to concentrate intensely on the reading process. Dr. Lozanov (1965) has suggested that human brain, freed from all distractions that hamper its functioning, resembles a sponge able to absorb knowledge and information of all kinds. The brain research of Dr. Wilder Penfield of the Montreal Neurological Institute supports this idea. Brain is like a built-in tape recorder in our head. It will effortlessly absorb information when obstacles are removed. Physical relaxation conserves energy for mental functioning and mental concentration removes the obstacles to cognitive functioning and indepth comprehension.

Distractions like mind wandering and daydreams are obstacles to reading comprehension, but a more devastating obstacle is in the form of limiting beliefs. We are conditioned to believe that we can only do so much, that there are limits to what we can achieve. Some of these beliefs might be rooted in reality, while others have no basis. The latter have arisen from experiences with false perceptions of stimulus situations. These beliefs place unnecessary limitations on things we can easily accomplish. These limiting beliefs should be counter-conditioned and this can be done by self-affirmations to the contrary. Thus, the third step is a form of self-image therapy which Dr. Lozanov has called Desuggestion.

When the brain, unbridled by limiting suggestions, concentrates in a state of relaxation on reading, comprehension is bound to be better and deeper. There is research evidence (Wallace, Benson and Wilson, 1971) that relaxed meditation brings about an increase in the slow alpha waves of the brain at eight or nine cyles per second. It is believed that during the production of slow alpha waves all parts of the brain are synchronized in their activities and according to the principles of equipotential

and complementarity the cognitive functioning should be at its optimum level. Indepth comprehension in reading should then be effortless and somewhat automatic.

A final step is that of self-reinforcement. Behaviorists have emphasized the importance of reinforcement in learning and cognition. In the case of human cognition feedback serves as effective reinforcement and the probability of reinforced behavior increases. How can people receive feedback while reading? An instantaneous reflection of the main and subordinate ideas after reading every paragraph would provide this feedback. Relaxation, concentration, desuggestion and synchronous alpha waves insure comprehension in reading. Instantaneous reflection of the main and component ideas in paragraphs provides feedback and reinforcement for continued indepth comprehension.

A word of caution. The ideas and the method suggested in this paper should not be viewed as panaceas for all reading problems; they are not. The basic skills of reading should be mastered through systematic drill and practice. The utilization of the suggested method, once the basic skills are mastered, is likely to result in a quantum leap as far as comprehension is concerned. We may then become superreaders. Dr. Jerome Bruner of Harvard University once said: "We are only on the threshhold of knowing the range of educability of man -- the perfectibility of man."

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